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ESTIMATES OF CAPABILITY OF RAILROADS IN COMMUNIST CHINA, 1952

Report of
Working Group of the EIC Subcommittee on Transportation

29 January 1954

I. Summary of Conclusions

This working group, while agreeing that 1952 Chinese Communist railroad performance approximated capability, has reached estimates of capability falling into two groups, which are on two distinctly different levels of magnitude. These two are so far apart that it has been found impossible to reach a unified position.

A. Army, Navy and Air Force are of the opinion that the approach to the problem and the magnitude of the conclusion (41 million metric tons originated, plus or minus 25 percent) in [REDACTED] "Capabilities of the Chinese Communist Railroads, Roads and Inland Waterways," are basically valid. These agencies have each conducted independent examinations of presently available intelligence, and have arrived at estimates of the capability of the Chinese Communist railroads to originate freight. These estimates, ranging from 45 to 60^{million} metric tons, indicate that a slight upward revision of the [REDACTED] conclusion may be in order.

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B. It is the opinion of State and CIA, on the basis of their separate analyses of available evidence, that the estimate of Chinese Communist 1952 railroad capability as stated in [REDACTED] is much below actual performance. CIA estimates a capability of at least 136 million metric tons originated, and it concurs with State that the railroad system in 1952 was capable of originating the 131 million tons claimed "hailed" by the Chinese Communists.

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The following table summarizes the conclusions of the respective agencies. Annexes setting forth the details of their respective viewpoints are attached.

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Position of the TSC/Working Group on Capability^{a/} of
Chinese Communist Railroads, 1952

	<u>Army</u>	<u>Navy</u>	<u>Air Force</u>	<u>State</u>	<u>CIA</u>
1. Operable Freight Car Inventory ^{b/}	40,000	40,000	40,000	40,000	46,100 to 53,100
2. Average Turn-Around Time (days)	5.2	6.0	5.57 to 9.2	2.9	3.4
3. Average Net Load Per Loaded Car (metric tons) . . .	24.0	24.0	23.1 to 28.7	26.0 to 28.7	27.5
4. Average Length of Loaded Haul (kilometers).	640	600	500 to 688.2	454	454
<u>Capability:</u>					
5. Net Tons Originated (million metric tons, annually)	60.65	45 to 60	45.1 to 60.5	131	136 ✓
6. Net Tcn/Kilometers (billion metric, annually) . . .	38.8	28 to 36	25.5 to 31	59.5	61.7

Note.-- The figures contained in this table cannot be properly evaluated without reference to the supporting annexes.

a/ It is the opinion of the group that 1952 performance approximated 1952 capability.

b/ Excluding cars under and awaiting heavy repairs.

5 = 133 x 365
= 48,545
= 46,000 + 10.2 = 48,545

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II. Factors Underlying Capability Calculations

One measure of capability is tons originated, assuming a constant length of haul and traffic pattern. There are several methods of calculating tons-originated capability. Among them are:

- a. Dividing ton-kilometers by average length of haul;
- b. Multiplying annual carloadings by average load per loaded car; or
- c. Dividing operable car park by turnaround time, and multiplying by average load per loaded car and by 365 days.

For each of the three methods there is at least one figure which is not directly available from any source, and interpretation and validity of those given is in dispute. Therefore, it has been necessary to derive needed figures by the use of sub-formulas, the figures for which were in turn derived, and therefore equally open to question down to their most minute basic constituents. Minute disagreements in one direction on many of these elements accumulate into large differences in the final figure. Furthermore, several agencies have used methods of calculating tons originated which differ in some respects from the three given above. Thus, any collated statement of the differences among the agencies would of necessity be very complex and lengthy; and within this working group there can be no resolution of these differences short of the introduction of significant new intelligence.

III. Underlying Reasons for Disagreement

The only contemporary figures on the performance of Chinese Communist railroads are those given by the Chinese Communists themselves, and there is basic disagreement among the agencies as to the interpretation and validity of these figures. For example, it has been suggested that the figure on tons "hauled" might be interpreted as meaning either net or gross tons originated, net or gross tons carried (in the US, net tons carried average twice the net tons originated), or net or gross tons handled.

Therefore, various indirect approaches were attempted, consisting of:

- a. Comparisons with past performance of the railroads within this area;

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- b. Comparison with other railroad systems; and
- c. An application of "planning-factor" figures and procedures.

In using comparative figures, either historical or from other countries, questions of interpretation of the figures, of validity of the comparison, and of the relative performance to be expected from the Chinese Communists have all been grounds for disagreement. For example, loading time in 1935-36 Chinese Nationalist data was given in ton-hours, and no agreement could be reached as to whether they were net, gross, or rated tons, or whether the figures included handling of both loaded and empty cars. Furthermore, there was no agreement as to the number of operating procedures included by the Nationalists in the term "loading time." Even if these differences could have been reconciled, there was no universally accepted tons-per-loaded-car figure to divide into ton-hours to produce average loading time per car. In utilizing 1950 Soviet statistics on loading time, agreement could not be reached as to the efficiency of Chinese Communist performance relative to that of the Soviets. In the application of the planning-factor approach, it has been found impossible for the agencies to agree on the formulae, or on the figures to use therein. For example, one of the elements in a planning factor approach is the running repair and pooling figure, the use and inclusion of which is not agreed to by all agencies.

IV. Recommendations

The working group recognizes the need for an agreed estimate of capability of Chinese Communist railroads, and believes that if certain items of intelligence were available, progress toward agreement would be facilitated. The working group's analysis of intelligence currently available has shown major gaps in intelligence, some or all of which need to be filled before agreement as to capabilities can be arrived at within this group. The major need is a reliable Chinese Communist compilation of railroad statistics. Lacking such a compilation, many of these gaps could probably be filled from available intelligence sources. Some of these gaps are:

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1. Precise definitions of Chinese Communist, Chinese Nationalist, and "Manchukuo" railroad traffic and operating terms.
2. Reliable statements by competent individuals presently or previously associated with Chinese Communist railroads with respect to the validity and interpretation of various Chinese Communist railroad statistics.
3. Understanding of methods used by Chinese Communists in collecting and compiling railroad statistics.
4. Descriptions by competent observers of loading, unloading, and freight car handling procedures at terminals and enroute (including freight car delays).

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CIA

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